

CATALOGUE  
OF SEYMOUR'S PATENT  
ROTARY VENTILATING FANS



MANUFACTURED BY

SEYMOUR & WHITLOCK,  
43 LAWRENCE STREET,

NEWARK, N. J., U. S. A.

M. FLUM, PRINT.

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## ELECTRIC OFFICE VENTILATOR.

A QUIET AND POSITIVE VENTILATOR; CAN BE USED AS AN  
AGITATOR OR EXHAUSTER.

*Get the Best and Save Money. A Good Article is Always the Cheapest.*

### **SPECIAL NOTICE.**

*Avoid Cheap Lubricants.*

Oil should not be used to lubricate either Fan or Shaft Journals. We furnish a lubricator which supersedes both oil and the ordinary grease. It prevents the heating of journals and dripping, which is unavoidable with oil. Insures quiet and smooth running and saves constant oiling, which is of the utmost importance where fans are used. Its superiority as a lubricant is beyond question, and no other should be used.

**GIVE IT A TRIAL.**

524-8.

# CATALOGUE

—OF—

SEYMOUR'S PATENT

## ROTARY VENTILATING FANS,



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43 Lawrence Street,

NEWARK, N. J.,     -     -     U. S. A.

MATTHIAS PLUM, PRINTER, NEWARK, N. J.

# SEYMOUR'S PATENT ROTARY VENTILATING FANS.

*NO INVENTION HAS DONE MORE FOR MAN'S  
HEALTH AND COMFORT.*

40,000 NOW IN USE.



They are Indispensable in all Climates.  
They Insure Reliable Ventilation.  
They drive out Flies and Mosquitos.  
They are used in Sick Rooms.  
They equalize the Temperature.  
They break up Draughts.  
They insure Comfort.  
They keep you Cool in Hot Weather.  
They are used in Stables.  
They give Horses Rest.  
They are used in Stores.  
They are used in Factories.  
They are used in Public Buildings.  
They are used in Theatres.  
They are used in Laundries.  
They are used in Breweries.  
They are used in Hotels.  
They are used in Offices.  
They are used in Restaurants.  
They are used in Railroad Stations.  
They are used on Steamers.  
They are used in Store Houses.  
They are used in Slaughter Houses.  
They are used in Butcher Shops.  
They are used in Bakeries.  
They are used in Kitchens.  
They are used for Drying Leather.  
They are used for Drying Goat and Sheep Skins.  
They can be Regulated to all Temperatures.  
They require but little Attention.  
They can be worked by Hand.  
They are Praised Wherever Used.

**DECISIONS OF THE UNITED STATES COURTS IN  
PATENT CASES.**

**Notice to Dealers and Purchasers of Rotary  
Ventilating Fans.**

**I**GNORANCE being no excuse in law, public attention is called to the fact that the SEYMOUR ROTARY VENTILATING FAN is protected by Letters Patent granted by the United States and Canada.

It is well known that no sooner is a valuable invention placed on the market and found to meet with public favor, than claimants for alleged improvements spring up in every direction. These claimants, while they seldom originate, are ever ready and on the lookout for a chance to display their ingenuity—not by new discoveries, but by making claim to improvements on original inventions. These claims, so often allowed under our present patent system, not unfrequently mislead purchasers and subject them to law suits and subsequent damages for infringement.

It must be understood, however, that while the Patent Office grants patents to claimants for improvements, it does not ignore or lessen the rights of original inventions. This has been fully established by a late decision of the United States Supreme Court in the case of *Tilghman vs. Proctor*, which settles the question as to the rights of inventors of improvements on original patents. The Supreme Court, in its decision, held that Tilghman having discovered a substantial principle, *his claim was not to be limited to his special apparatus*, but would protect him against infringers using the same principle or process *in any form of apparatus*.

It is upon the basis of the last decision of Tilghman vs. Proctor that the validity of the broad claim of Bell's telephone patents was sustained by Judge Gray, of Boston. The Judge in giving his decision, said: "Few legal rules have been oftener misunderstood and misapplied than the maxim that you cannot patent a principle. A person who has invented or discovered any new and useful art, is entitled to a patent for the process of which he is the first inventor, *and is not restricted to the particular form of mechanism by which he carries out his process.* Another person who afterwards invents an improved form of apparatus embodying the same process, may indeed obtain a patent for his improvement, *but he has no right to use the process in his own or any other form of apparatus without the consent of the first inventor.*"

## U. S. CIRCUIT COURT.

KING vs. MORTON, et al.

Rendered July 2, 1894.

*aff.* It has never been held that an equivalent known at the date of the invention could be used without infringing the patent; such a holding, if generally adopted, would amount practically to the destruction of the law of equivalents.

*aff.* *If an inventor is the first to produce a result, he is entitled to all means known at the date of his patent by which the same result can be produced.*

In the case of Howe vs. Underwood, Judge Sprague says: "How inevitable is it that after a great invention has been brought before the world, has become known to the public and yet is found to be useful, that people start up in various places and declare that they invented the same thing before. After seeing *one* what has been done, the mind is very apt to blend antecedent information with your revelations and confuse them together. *Prophets after the event, is easy prophesy.*"

From the above it will be seen, that the United States Courts intend to broadly and fully protect inventors who have made substantial improvements in the art, against those whoery the claims of the invention consists simply in the application of well-known devices, or change of mechanism for the purpose of circumventing an original invention.

Persons contemplating the use of Rotary Ventilating Fans will find it to their interest, before purchasing, to *examine the Patent Office records* as to the validity of the patents offered, and compare the same with the claims of the patents granted to James M. Seymour for Rotary Fans.

*And the patentee hereby gives notice* to any and all parties who may be engaged in *making, vending, using or in any way infringing said patented rights*, that they will be held to a strict account for damages.

PATENTS GRANTED TO JAMES M. SEYMOUR FOR ROTARY  
VENTILATING FANS.

	Patent No.	284,077,	dated	August	28,	1883.
Re-issue	„	„	10,539,	„	December	2, 1884.
„	„	„	10,657,	„	November	3, 1885.
„	„	„	325,453,	„	September	1, 1885.
„	„	„	326,883,	„	September	22, 1885.
„	„	„	330,627,	„	November	17, 1885.
„	„	„	331,092,	„	November	24, 1885.
„	„	„	332,446,	„	December	15, 1885.
„	„	„	333,349,	„	December	29, 1885.

*SEYMOUR'S PATENT ROTARY VENTILATING FANS.*

IT remains an undisputed fact that the Seymour Rotary Ventilating Fan is the best practical means yet devised to insure positive and reliable ventilation. The most important feature of this system, in addition to its extreme simplicity, is the ease with which THE FAN CAN BE REGULATED to conform to all temperatures, so as to impart during the hottest of weather, a cool and pleasant circulation of air.

No better proof of the superiority of this Fan over all other attempts at ventilating can be had than the practical results obtained from an inspection of the fans themselves, which can be had by visiting some one of the many Hotels, Offices, Stores, Dining Rooms, Saloons, Markets or Factories now using them in this country and Canada.

### STARTING AND STOPPING FANS.

**F**OR Personal Comfort, the Starting and Stopping of Fans is a matter of more than ordinary importance, particularly so when it is found necessary to increase or decrease the Air Circulation of some one Fan without *interfering* with the others, which, for the comfort of guests, is often required in Dining Rooms, Saloons and places where a number of Fans are used. This is done by simply pressing the *Stop* (which is connected with the Regulator below the Fan) either up or down.

### FANS FOR WINTER USE.

**T**HE prevailing idea that Fans are unnecessary during severe weather only is erroneous. Originally they were made for that purpose, but practical experiments have proven them to be of great value as a means of *equalizing the temperature of rooms in Winter*. This is done by the use of the *Revolving* attachment and arrangement of the blades which, when in motion, create a gentle and positive circulation of air throughout all parts of the room.

If the Fans are used according to directions, unpleasant drafts will be avoided and an evenness of temperature will be insured.

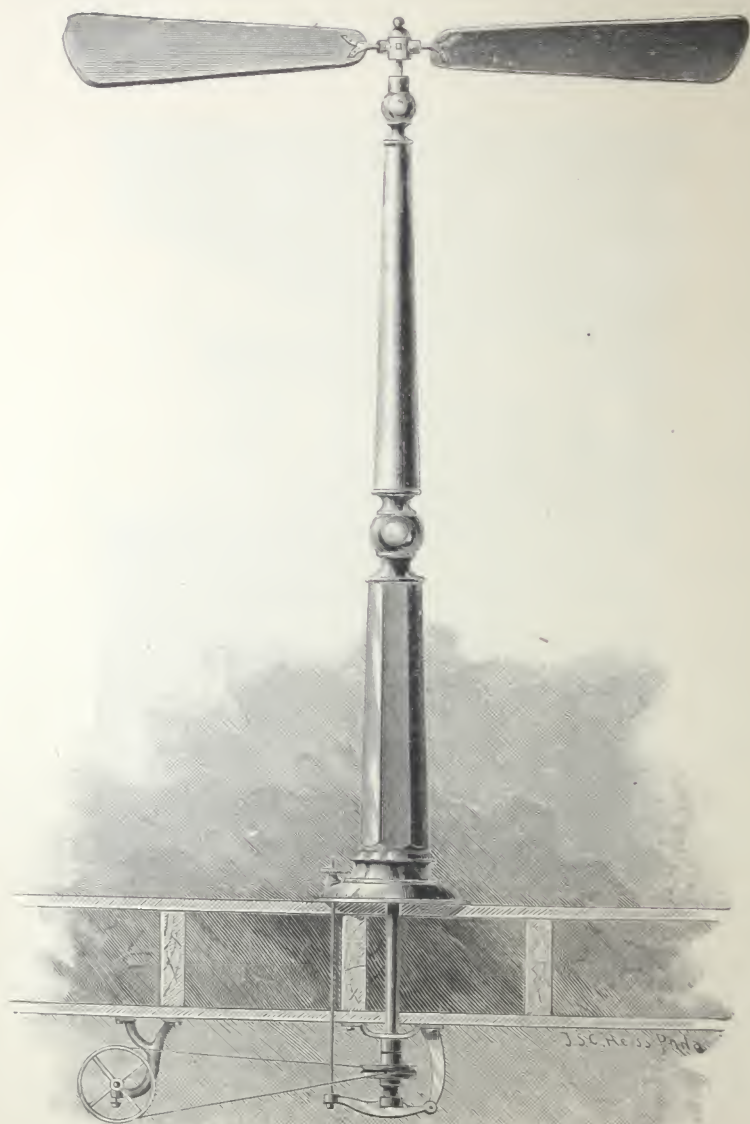
**SELF-REGULATING FRICTIONAL MOVEMENT.*****For Keeping Rooms Free from Flies.***

**T**HIS is one of the latest and most valuable improvements designed for the purpose of Keeping Rooms Free from Flies. The Frictional Movement, while it imparts sufficient motion to the Fans to accomplish that purpose, yet does not, even on cool days, create an unpleasant circulation. Hundreds of Fans are now used in Dining Rooms and Markets; and for the purpose alone of keeping out flies it has proved invaluable, it being a well-known and noticeable fact that no matter how infested a room may be with flies, they disappear as soon as the Fans are in motion.



**TANDEM FANS.**

The above cut represents the arrangement for running Fans "Tandem," or one from the other, by means of double groove pulleys. Two Fans driven from another is all that can be worked advantageously in this way.



*Columnar Fan, with Frictional Clutch.*

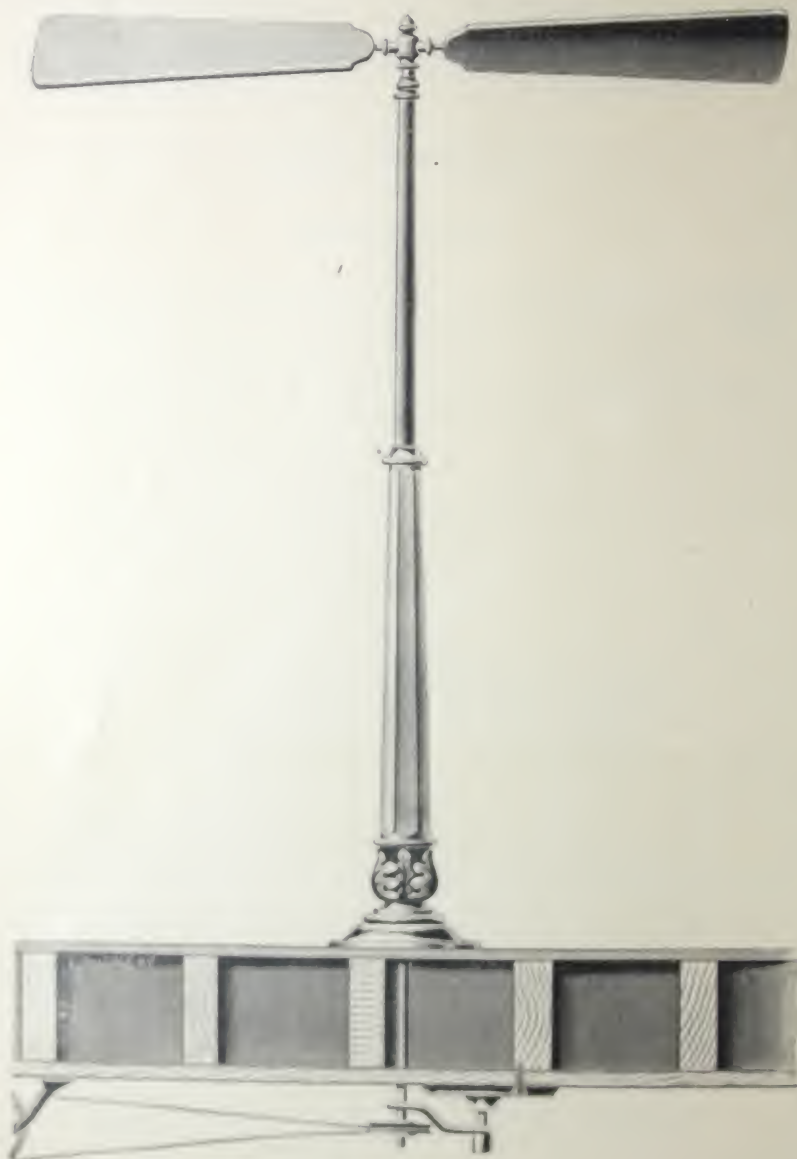
## COLUMNAR FANS.

### *Frictional Clutch.*

THE cut presented on opposite page represents one style of Columnar Fans. The sectional view shows the Frictional Attachment and general arrangement for driving the Fan from under the floor. This Fan can be stopped or started at pleasure, without the necessity of interfering with the motive power of any other Fan that may be in operation. This is of the most importance, especially during changeable weather, when, for personal comfort, it is found necessary to increase or diminish the speed of a Fan so as to conform to any change in temperature. Columnar Fans are provided with this attachment, can be worked and regulated independently of each other, which at times is absolutely necessary to insure an agreeable and perfect ventilation.

Columnar Fans are more particularly intended for Halls, Hotels, Hospitals and places having high ceilings, for which, when required, we make special designs, richly ornamented, to harmonize favorably with other decorations of the room.

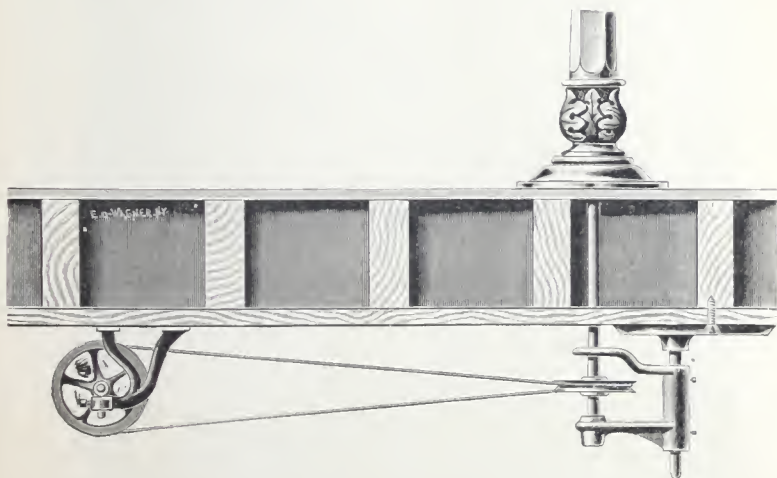
Fans of special design vary in price according to design and ornamentation.



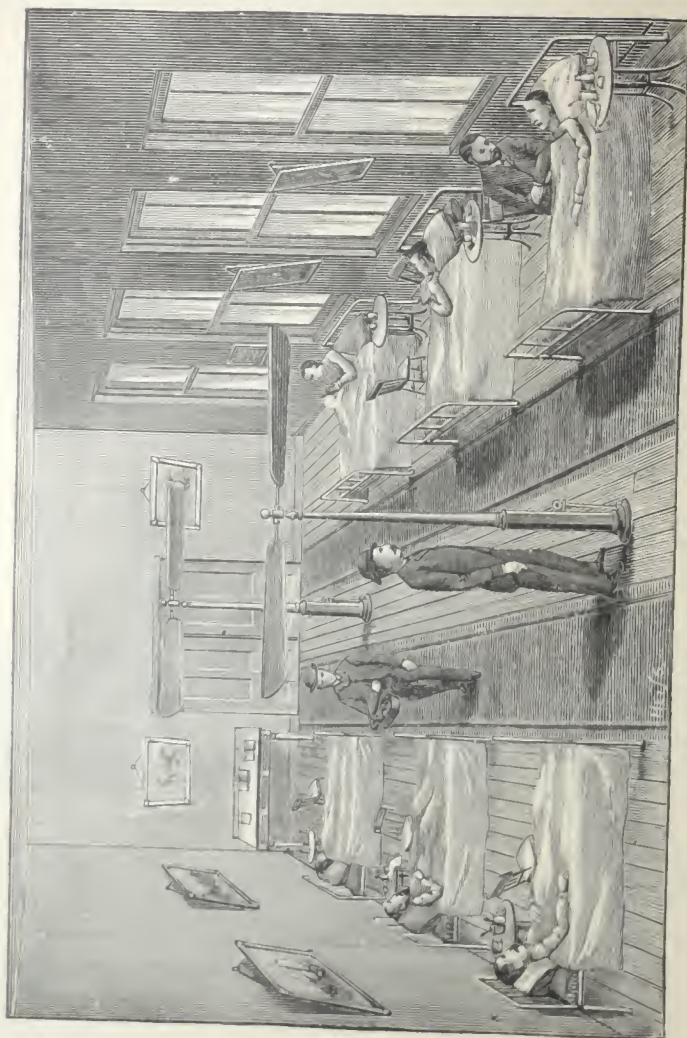
*Columnar Fan with Positive Clutch.*

*COLUMNAR FAN.**With Positive Clutch.*

THE Columnar Fan shown on this page and the opposite page, is the one now in general use. It is not only symmetrical in design, but durable, easily adjusted and positive in action. The upper half of column is of brass, nickel plated, and the lower part being of japanned iron, gives it a rich and pleasing appearance. The clutching arrangement for starting and stopping the movement of the blades is immediately below the fan blades. When unclutched the blades move slowly, imparting a gentle circulation of air. The maximum speed can be had by throwing in the clutch, making it cool and refreshing in the hottest of weather.



The above cut shows the lower part of the Fan on opposite page, with arrangement for supporting and driving fan shaft beneath the floor.



*Rotary Ventilating Fans for Hospitals.*

### ROTARY VENTILATING FANS FOR HOSPITALS.

A GENERAL idea of the arrangement of Columnar Fans in Hospitals is shown on the opposite page. We would state, however, that when the construction of the building will not admit of the use of the Fans as here presented, the Suspended Fans can be used to equally as good an advantage. It remains an undisputed fact that nothing (and particularly so during hot and sultry weather) is more conducive to the comfort of patients than a positive and proper circulation of air unattended by drafts. This very desirable object is attained by the use of our Rotary Ventilating Fans. They not only furnish cool and refreshing air, but at the same time keep the room free from flies. The air circulation can be increased or diminished at pleasure in any part of the room, to suit the comfort of the patients. This is done by means of the Regulator, with which each Fan is provided, and so arranged that *each Fan is independent of the other*, and can be stopped or started, and made to run slow or fast to produce the desired circulation. We would invite those interested to investigate this method of ventilating for the purpose above mentioned.

#### *Hospitals in India.*

A correspondent of the press, speaking of the hospitals in India, says: "The fans suspended in the great hospital at Madras for the purification of the air, which has hitherto been by hand, are now operated by steam power, the substitution being both effective and economical. The machinery by which this is accomplished is quite simple. The fans, 100 in number, work smoothly, steadily and without noise of any kind. The uniform, continuous motion insures the desired change of air without occasioning a draft."



*Man Power Attachment.*

**MAN POWER ATTACHMENT.**

HAVING had many inquiries for Ventilating Fans from the country, sea-side and other places where water and steam power is not obtainable, we have completed a very simple machine whereby the Fans can be worked to advantage by man power, as shown in the engraving on the opposite page. By its use *one man can with comparative ease run from 6 to 8 Fans*, the action of the Fans clearing the room of flies and other insects, creating at the same time a positive and pleasant circulation of air, which is almost indispensable in dining rooms at meal hours. This simple device enables parties that are unprovided with steam or water power to keep the rooms free from flies and provide for their guests, during hot and sultry weather, a cool and refreshing circulation of air.



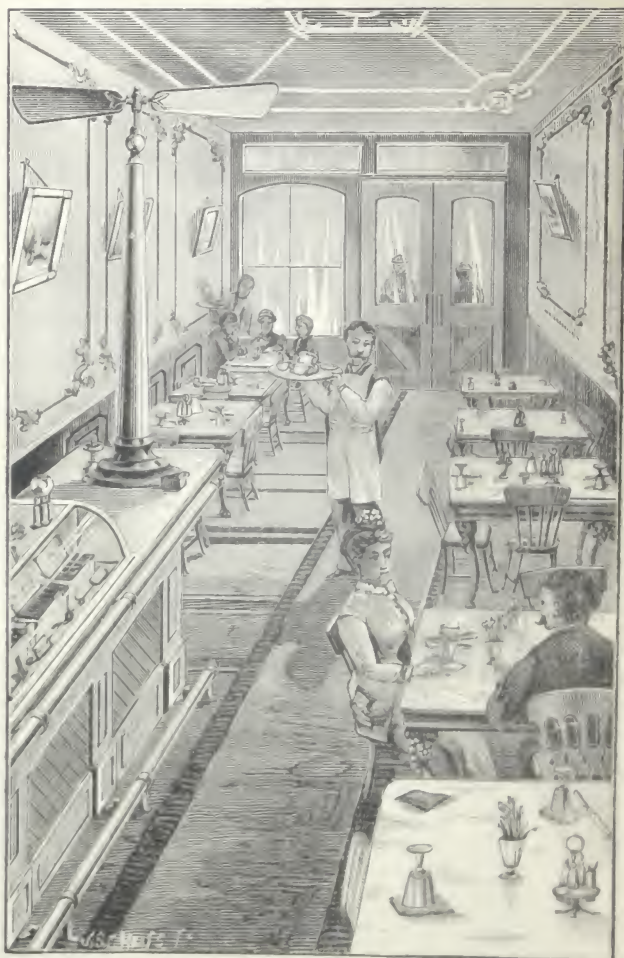
*Revolutionary Fans for Laundry.*

### *VENTILATING FANS FOR LAUNDRIES.*

ONE of the severest tests to which the Seymour Rotary Fans have been subjected, has been in the ventilating of laundries. Being the first to successfully accomplish this purpose with Ventilating Fans, we present a sketch showing the general arrangement of same.

By this means a positive circulation of the air is produced (which can be increased or diminished at pleasure), and make rooms that heretofore were insufferable during hot weather, pleasant and comfortable.

To parties who have failed with experiments, we would say that this system of ventilating is a well-known and an established success, and can be seen in operation in hundreds of places, both in this city and other sections of country.



*Columnar Fan for Counter.*

*COLUMNAR FANS FOR COUNTERS.*

THE accompanying engraving represents a plain but very neat style of Rotary Ventilating Fans, used for counters. They take up but little room, and are specially adapted for Hotels, Stores, Saloons and Lunch Counters. Like all the other Columnar Fans, they are provided with the Graduating Attachment, which allows the Fan to be run fast or slow, at pleasure. They are ornamental, and a luxury in warm weather.

Specially designed Fans vary in price according to style and ornamentation.



*Restaurant for the Restaurant*

*COLUMNAR FANS FOR RESTAURANTS.*

THE annexed engraving gives a general idea of one style of Columnar Fan, provided with Circular Tables on which to place eatables. It is a sure protection from flies, and serves the same purpose for ventilating as any of our other Fans. They are ornamental, and the food being absolutely free from flies, gives everything a clean and inviting appearance.

Parties using these Fans will at once see the benefit to be derived from their use, and, as they combine all the advantages of the regular fan and purposes before mentioned, every Restaurant should have one.

Special designs vary in price according to ornamentation.

*Hand Power*

*HAND POWER.*

**W**E present a very neat, cheap and simple design for driving from one to three Fans. They are easily worked, and take up but little room, as shown in the cut. For the sick room, nothing could be more desirable; they have been successfully used for that purpose, and are highly recommended. They were especially designed for places where other power cannot be conveniently secured, and are now in use in Mexico and South America.

We can furnish them plain or ornamented.

When ordering, the height of ceiling and other dimensions of room should be given.



**O**N opposite page is shown a very neat arrangement for driving Fans, which is much used for rooms with low ceilings, and where overhead shafting would be objectionable.

Where two or three Fans are needed, they can be driven "tandem," by belting from one to the other.

The Driving Shaft in this case is located beneath the floor, and the belt, as shown in cut, carried through openings in floor to an Idler fastened to the side wall, and thence to the Fan. The belt, if desired, can be suitably incased, relieving the room from any objectionable feature.



*Electric Fan.*

### ELECTRIC FANS

**F**ULLIS Fan, as its name indicates, is driven direct from an electric motor. We would state that this application of power in this way, while it dispenses with the use of shafts and belting, is much more expensive and less effective than the other Fans heretofore presented and in general use.

In ventilating, the first object to be kept in view is to secure an even and perfect circulation of air, and the fans are arranged that they can be regulated by foot fan or electric, according to the changes in temperature, or as circumstances may require. Thus the Electrical Fan, as now constructed, does not admit of, and need not be run at full speed or stop, which is an objection, as sudden changes of the temperature should be avoided, and particularly so in hot weather.

If two or more fans are needed, we advise the use of one motor to drive the required number. These can most cheaply, are better and not liable to derangement; they can be run independently of each other and each fan can be allowed to produce a strong or gentle current of air, which is needed for perfect circulation.



**STANDARD STYLE**

*Herbick & Whitehead, Fan, used for high ceilings. When desired,  
we furnish special designs.*



STANDARD STYLE.

STEWART FAN, for cooling—It runs at low average height.  
Special designs furnished when required.



*STANDARD STYLE.*

SUSPENDED FAN, FOR ORDINARY HEIGHT CEILING.



*STANDARD STYLE.*

SUSPENDED FAN, WITH FOR LOW CEILING.



FANCY SCROLL

SUSPENDED FAN, UNDER THE HIGH CEILING



*FANCY SCROLL.*

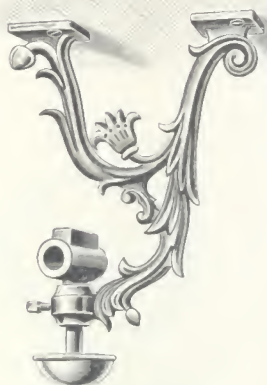
SUSPENDED FAN, USED FOR ORDINARY HEIGHT CEILINGS.



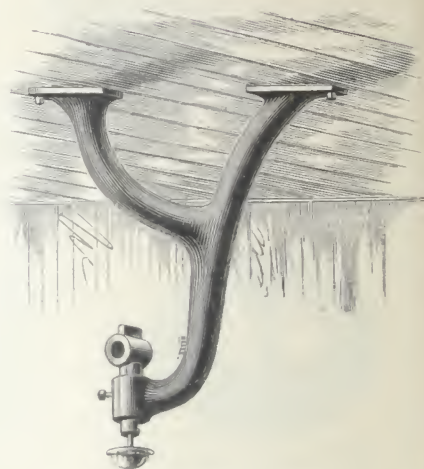
Horizontal Idler

Split Cone Pulley,  
Double GrooveCone and Flat Pulley,  
Single Groove

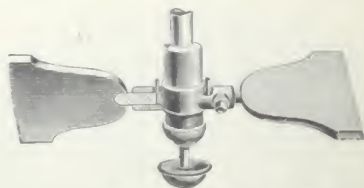
Counter-Shaft, with Flat and Crowned Pulley



Fancy Adjustable Hanger for  
Line Shaft and Counter.



Plain Adjustable Hanger for  
Line Shaft and Counter.



SAFETY PINS, as Used on Fans.

# SAFETY PINS.

**AVOID DANGER.**

**NO FAN SAFE WITHOUT THEM.**

**S**ERIOUS results have arisen from fan blades working loose and flying out of the fan hubs.

This is of common occurrence where set screws alone are used to hold them in position. The use of Safety Pins has overcome this difficulty, and made the Rotary Ventilating Fans perfectly safe and reliable. It being impossible for a fan blade to fly out, even if the set screw, which is supposed to hold it, should work loose. This safety appliance consists of two pins that are furnished with each fan, and a hole corresponding to the size of the pins in the shank of each fan blade. Their use is to reserve the pins, after the shank of the fan blade is inserted into the hub on the fan shaft. The pin, when driven in the hole, not only prevents the blade from flying out, but also determines the proper angle of the blade, by simply turning the blade until the pin strikes the hub.

As a matter of precaution, fans in every instance should be provided with Safety Pins before they are started.

## PRICE LIST SUSPENDED FANS

*With Standard Blades.*

	STANDARD.	FANCY SCROLL.
8 inch drop.....	\$ 6.25	\$ 8.25
12 " " .....	7.00	9.25
1 foot 6 " " .....	7.75	10.00
2 " " " .....	8.50	11.00
2 " 6 " " .....	9.25	12.00
3 " " " .....	10.00	13.00
3 " 6 " " .....	10.75	14.00
4 " " " .....	11.50	15.00
4 " 6 " " .....	12.25	16.00
5 " " " .....	13.00	17.00
5 " 6 " " .....	13.75	18.00
6 " " " .....	14.50	19.00
6 " 6 " " .....	15.25	20.00
7 " " " .....	16.00	21.00
7 " 6 " " .....	16.75	22.00
8 " " " .....	17.50	23.00

Suspended Fans of special design vary in price according to style and ornamentation.

Columnar Fans can be furnished from standard or special designs, from \$25 and upward.

Columnar Fans for Counters, range according to design and finish, \$25 and upward.

Columnar Fans for Restaurants, vary according to ornamentation, \$50 and upward

All goods delivered at works. Boxing extra.

*The Drop* is the distance from the *Fan Blade to the Ceiling*. To insure the best circulation, the Fan Blades should be from 7 feet 6 inches to 8 feet from floor. For instance, a 10 feet ceiling should have not less than a 2 foot Drop Fan.

## PRICE LIST.

### *Appendages Specially Designed for Running Fans.*

Bolsters for Fans (Round), 8 inch.....	\$0.35
"    "    "    "    10 " to 18 in. drop inclusive	0.50
"    "    "    (Triangular), 2 ft. to 3 ft. 6 in. "	.75
"    "    "    "    4 ft. to 5 ft. 6 " "	1.00
"    "    "    "    6 ft. to 8 ft. " "	1.50
"    "    Hangers and Horizontal Idlers, 5 in. to 11 in. drop inclusive.....	0.35
Bolsters for Hangers and Horizontal Idlers, 12 in. to 18 in. drop inclusive.....	0.45
Shafting ( $\frac{3}{4}$ inch) per foot.....	0.25
"    ( $\frac{7}{8}$ inch) " ".....	0.35
Coupling for $\frac{3}{4}$ inch Shaft.....	1.50
"    " $\frac{7}{8}$ " ".....	1.75
Counter Shafts vary in price according to style and size.	
Collars.....	0.25
Idler Horizontal, 5 inch drop, standard style.....	2.50
"    "    6 " " " ".....	2.60
"    "    7 " " " ".....	2.70
"    "    8 " " " ".....	2.80
"    "    9 " " " ".....	2.90
"    "    10 " " " ".....	3.00
"    "    11 " " " ".....	3.15
"    "    12 " " " ".....	3.30
"    "    13 " " " ".....	3.45
"    "    14 " " " ".....	3.60
Price of ELABORATE vary according to finish.	
Idler Vertical, 6 inch drop, standard style.....	3.50
"    "    10 " " " ".....	4.00
"    "    12 " " " ".....	4.50
"    "    18 " " " ".....	5.00
"    "    24 " " " ".....	5.50
"    "    30 " " " ".....	6.25
"    "    36 " " " ".....	7.00

Price of ELABORATE vary according to finish.

## PRICE LIST.

Hangers, 5 inch Girder, and standard style.....	1.00
6   "   "   "   "   "   " .....	1.05
7   "   "   "   "   "   " .....	1.10
8   "   "   "   "   "   " .....	1.15
9   "   "   "   "   "   " .....	1.20
10   "   "   "   "   "   " .....	1.25
11   "   "   "   "   "   " .....	1.30
12   "   "   "   "   "   " .....	1.40
13   "   "   "   "   "   " .....	1.50
14   "   "   "   "   "   " .....	1.60
18   "   "   "   "   "   " .....	2.00
6   "   Bracket   "   "   " .....	1.50
Price of ELABORATE vary according to finish.	
Pulley, Single Groove, Line Shaft, 3, 5 and 6 inch.....	0.50
"   "   "   "   "   8 and 9 inch.....	0.75
"   "   "   Fan Spindle, 3, 5 and 6 inch.....	0.50
"   "   "   "   "   8 and 9 inch.....	0.75
Split Cone, Double Groove, $2\frac{7}{8}$ and $3\frac{3}{8}$ inch.....	1.25
"   "   "   "   " $3\frac{1}{2}$ " $4\frac{1}{4}$ " .....	1.50
"   "   "   "   " $3\frac{3}{4}$ " $4\frac{3}{8}$ " .....	1.75
"   "   "   "   " $6\frac{1}{8}$ " $7\frac{1}{2}$ " .....	2.25
"   "   "   "   " $8\frac{1}{4}$ " $9\frac{1}{4}$ " .....	3.00
"   "   "   Triple Groove, $4\frac{3}{8}$ , $6\frac{1}{2}$ and $8\frac{3}{8}$ inch...	3.75
"   "   "   "   " $10\frac{1}{4}$ , $11\frac{3}{4}$ and $13\frac{1}{4}$ inch	4.50
Sheave, 8 inch.....	1.50
"   9   " .....	1.65
"   10   " .....	1.80
"   11   " .....	1.90
"   13   " .....	2.00
"   15   " .....	2.35
"   17   " .....	2.60
"   19   " .....	2.90
"   21   " .....	3.25
Flat Special, 3 inch diameter, $2\frac{1}{2}$ inch face.....	1.30
"   "   "   5   "   "   " .....	1.45
"   "   "   6   "   "   " .....	1.50
"   "   "   7   "   "   " .....	1.55
"   "   "   8   "   "   " .....	1.80

## PRICE LIST.

Pulley, Flat Special, 9 inch diameter,  $2\frac{1}{2}$  inch face . . . . . \$2.15

"	"	"	10	"	"	"	2.50
"	"	"	11	"	"	"	2.60
"	"	"	12	"	"	"	2.85
"	"	"	13	"	"	"	3.00
"	"	"	14	"	"	"	3.20
"	"	"	15	"	"	"	3.40
"	"	"	16	"	"	"	3.70
"	"	"	18	"	"	"	4.20
"	"	"	20	"	"	"	4.55
"	"	"	22	"	"	"	5.30
"	"	"	24	"	"	"	5.90

Belt, Special Leather, 1 inch wide, per foot . . . . . 0.10

"	"	"	$1\frac{1}{4}$	"	"	"	0.13
"	"	"	$1\frac{1}{2}$	"	"	"	0.17
"	"	"	$1\frac{3}{4}$	"	"	"	0.20
"	"	"	2	"	"	"	0.23
"	"	"	$2\frac{1}{4}$	"	"	"	0.26
"	"	"	$2\frac{1}{2}$	"	"	"	0.30
"	"	"	$2\frac{3}{4}$	"	"	"	0.33
"	"	"	3	"	"	"	0.36
"	"	"	$3\frac{1}{2}$	"	"	"	0.43
"	"	"	4	"	"	"	0.50
"	"	"	$4\frac{1}{2}$	"	"	"	0.56
"	"	"	5	"	"	"	0.63
"	"	"	$5\frac{1}{2}$	"	"	"	0.70
"	"	"	6	"	"	"	0.76
"	"	"	$6\frac{1}{2}$	"	"	"	0.83
"	"	"	7	"	"	"	0.90
"	"	"	8	"	"	"	1.02
"	"	"	9	"	"	"	1.15
"	"	"	10	"	"	"	1.29
"	"	"	11	"	"	"	1.42
"	"	"	12	"	"	"	1.55
"	Special Round, $\frac{5}{16}$ inch, Leather . . . . .						.14
"	"	"	$\frac{3}{8}$	"	"	"	.18
"	"	"	$\frac{1}{2}$	"	"	"	.30
"	"	"	$\frac{5}{8}$	"	"	"	.36



### ***IN ORDERING FANS***

See that Agents furnish the Fans complete, with all attachments. They cost no more, and are a protection against sudden changes of temperature.

### ***THE SIZE OR DROP OF SUSPENDED FANS***

is determined by the height of ceiling, and the best result is obtained by keeping them about seven feet six inches from the floor. If your ceiling is ten feet high, your order should call for a fan two feet six inches drop. In case of a low ceiling, a less drop can be used to advantage.

### ***SPEED OF FANS.***

To obtain a good circulation of air, the Fans should be run according to the sweep of blades, and as near the following speed as possible :

Fan Blades (standard size) sweep four feet ten inches, revolutions per minute.....	155
Fan Blades (medium size) sweep five feet six inches, revolutions per minute.....	150
Fan Blades (large size) sweep six feet three inches, revolutions per minute.....	140

### ***STEAM POWER***

We build a special small size Engine for driving Fans. It possesses advantages not to be found in those of ordinary construction, takes up but little room, and runs at a very low steam pressure, which is what is wanted in warm weather, and for boilers confined to low pressure.

### INSTRUCTIONS.

**I**N putting up Sauerstein Fans, and to insure safe and proper fastenings, care must be taken to find beams, to which the fan frames should be attached, using screws of sufficient length to admit of a hold of at least one and a half to two inches, according to size of fan. Where it is found necessary, on account of the width of a room, to have fans on either side, the Line Shaft should run through the centre of the room. In narrow rooms, fans are usually placed in the centre and the Line Shaft close to the side wall. The Hangers that support Line Shafts should be placed about five feet apart, and fastened so tight and so arranged that the pulleys that drive the fans come as close as possible to some one Hanger; and the same should be done in the case of couplings, to prevent any possible spring or bending of shaft. The standard length of our three-quarter size Line Shaft is ten feet. Each fan should receive power direct from the Line Shaft. They can be run Tandem, or one from the other. It is not advisable, however, to run more than two or three fans this way. In cases where rooms are separated by a girder, power can be conveyed from one to the other by means of lifters, which we furnish for that purpose.

When power is supplied from a Water Motor, the Motor should be placed at the lowest convenient point for the purpose of securing the greatest possible head of water.

**IN ORDERING FANS***The Following Information is Requested:*

NUMBER OF FANS REQUIRED.

LENGTH OF ROOM,      feet,      inches.

WIDTH OF ROOM,      feet,      inches.

HEIGHT OF CEILING,      feet,      inches.

HEIGHT OF GAS FIXTURE BURNER FROM FLOOR,      feet,  
   inches.

DISTANCE OF GAS FIXTURES FROM FRONT OF BUILDING,  
                         feet,      inches.

DISTANCE OF GAS FIXTURES FROM REAR OF BUILDING,  
                         feet,      inches.

DISTANCE OF GAS FIXTURES FROM SIDE WALLS,      feet,  
   inches.

DISTANCE OF GAS FIXTURES FROM EACH OTHER,      feet,  
   inches.

ON WHAT FLOOR OR FLOORS ARE FANS TO BE USED?

DO YOU PROPOSE USING A STEAM ENGINE, WATER OR ELEC-  
TRIC MOTOR?

IS THERE STEAM POWER IN BUILDING?

ARE YOU SUPPLIED WITH CITY WATER? IF SO, STATE PRES-  
SURE.

HAVE YOU A SEWER CONNECTION?

PLEASE MAKE A PLAN OR SKETCH, SHOWING LOCATION OF GAS  
FIXTURES, COUNTERS, OR ANY OTHER FIXTURES IN ROOM  
AND RELATIVE DISTANCES.

The above information will enable us to give cost of com-  
plete outfit.



## SEYMOUR'S PATENT EXHAUST FAN.

*For Ventilating, Drying, Cooling, or Moving Economically  
Large Bodies of Air.*

**POSITIVELY NO BACK DRAFT.**

For full particulars relating to Exhaust Fans, send for  
Special Catalogue

**EXHAUST FAN.**

**T**HE Fan shown on opposite page is a well-built, strong and effective machine. The peculiar construction of the blades and conical frame make a fan that in one year has won for itself a wide reputation.

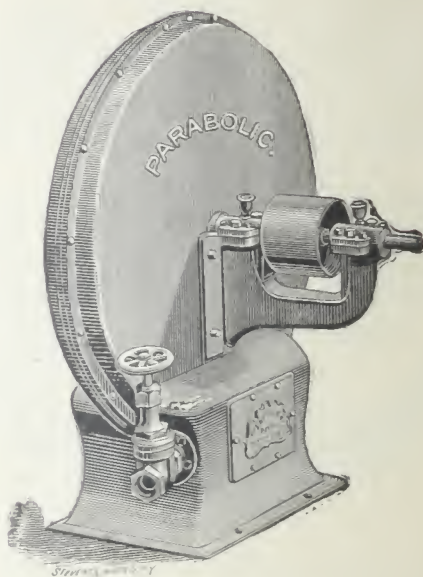
It will move more air for the power used than any fan ever made.

It has Self-oiling Bearings, and is in every way well built and durable.

Size.	Speed.	Horse Power.	Capacity Cubic Feet per Minute.	Pulley.		Price.	Box, Net.
				Diam.	Face.		
18	1,000	.24	3,100	3	2 1/2	\$40.00	\$0.75
24	1,000	.59	7,200	4	2 1/2	50.00	1.00
30	1,000	.86	12,100	6	2 1/2	65.00	1.25
36	1,000	1.18	17,900	8	2 1/2	85.00	1.50
42	1,000	1.90	25,600	8	2 1/2	110.00	1.75
48	800	2.15	34,400	10	2 1/2	125.00	2.00

The above are about the maximum speeds, and it is better to run fans slower. If required, the power at any speed will be given.

**SEND FOR DISCOUNTS.**



*The Parabolic Water Motor.*

SEYMOUR PATENT, NOVEMBER 30, 1886.

### THE PARABOLIC WATER MOTOR.

IT is a well-known and an established fact that in cities or places provided with water, that a properly constructed water motor for light mechanical purposes is the safest, most convenient and reliable power that can be used. Parties contemplating the use of water as a motive power, will, by giving us a call before placing their orders, *save money, both in cost of machine and use of water.*

The PARABOLIC can be used advantageously for driving Church Organs, Ice Cream Freezers, Printing Presses, Elevators, Coffee Mills, and every and all kinds of light machinery. We have already demonstrated by practical tests, that the Parabolic, besides being the cheapest and most reliable, will develop more power with a greater saving of water than any other water motor in the market.

A series of tests made by hydraulic experts has fully established the Parabolic's high claim for efficiency, the tests, as conducted, being positive and conclusive, viz. weighing the water used, under a pressure of 30 lbs. to the square inch, and comparing the same with the number of pounds weight raised in feet per minute.

A comparative test with well-known and extensively used motors was made at the same time and place, and under the same conditions, developed the fact that *the Parabolic, using the same amount of water, did over 80 per cent. more work.*

In addition to the above, there are other reasons why the Parabolic is superior to all others:

*First.* It is the only Water Motor that is provided with brass working parts, where the same are subjected to the action of the water.

*Second.* It has hard anti-friction metal bearings, thereby reducing the friction to a minimum.

*Third.* It works as well with sandy or muddy water as with clear.

*Fourth.* Should a stone or eel get wedged in the nozzle, it can be removed without disturbing the plumbing work.

*Fifth.* The prices are lower than any other motor in the market, and include a Straight-way Valve, Union, Nipple and Driving Pulley, either flat or grooved.

### PRICES.

12	Inch Motor, Complete	.....	\$ 35 00
18	"	"	55 00
21	"	"	75 00
30	"	"	130 00
30	"	"	Double Capacity, 180 00

### SMALL SUPPLY PIPES.

Many users of motors imagine that by using small pipes they make a saving in water. This is not only a mistaken idea, but false economy. The nozzle at the motor should at all times have the full main or supply pipe pressure. This cannot be had if the area of feed pipe is contracted below the proper limit. The use of small pipes means a greater consumption of water with an increased friction in the supply pipe. The effective force which is thus wasted can be utilized, and the power of the motor brought up to its proper standard of efficiency by conforming to the above.

In ordering, state the amount of water pressure, and the distance from street main to motor.

In evidence of the claims made for the Parabolic, we refer to the following testimonials from well known parties.

## TESTIMONIALS.

NEWARK, N. J., October 11, 1886.

Messrs. SEYMOUR & WHITLOCK, City.

*Gentlemen*—In reply to your inquiry asking for a fair and impartial statement relating to the merits of the 22-inch Parabolic Water Motor recently put in our Temple to take the place of a 30-inch Backus Water Motor, can only say, that as to the comparative merits of the two motors, a simple statement of our experience will be all that is needed.

Some time ago we purchased a 30-inch Backus Water Motor to drive our organ. Finding it did not furnish power enough to do the work, we were compelled to use man power to assist the motor, believing the trouble was due to an insufficient water pressure, until our attention was called to the power developed by your Motor. We take great pleasure in saying that the Parabolic Water Motor, although much smaller than the Backus (being but 22 inches), is doing all you claim for it. We use less water, have an abundance of power, and in every way it is working to our entire satisfaction.

Respectfully yours,

J. LEUCHT,

*Minister of Temple Street Tabernacle.*

92 AND 94 MARKET STREET,

NEWARK, N. J., October 6, 1886.

Messrs. SEYMOUR & WHITLOCK, City.

*Gents*—You are at perfect liberty to use my name in connection with the Parabolic Water Motor, and particularly so as it has exceeded my expectations. I am using less water, and as near as I can judge, getting about double the amount of power I did from the same size Backus Motor. I am only sorry I did not make the exchange sooner.

Yours truly,

JULIUS ISAACS.

148 MARKET STREET,

NEWARK, N. J., October 14, 1886.

Messrs. SEYMOUR & WHITLOCK:

*Gentlemen*—You ask for an expression regarding the Parabolic Water Motor furnished me last summer. It gives me pleasure to state that I am well pleased with it—so much so, that I shall want another (even larger size), to be used in the main building. I can give it no better endorsement.

Yours truly,

OTTO MÖLTER.

216 MARKET STREET,

PATERSON, N. J., October 28, 1886.

Messrs. SEYMOUR &amp; WHITLOCK, Newark, N. J. :

*Gentlemen*—It affords me pleasure to add my testimony to the already well-known merits of your Parabolic Water Motor.

Speaking from practical experience, I do not believe there is a water motor in the market (using the same amount of water) that can do the work the one I purchased of you is doing. As a motive power I consider the Parabolic the cheapest, best and most convenient now in use.

Yours respectfully,

JOSEPH A. REINHARDT.

210 MARKET STREET,

NEWARK, N. J., September 8, 1886.

Messrs. SEYMOUR &amp; WHITLOCK, City :

*Gentlemen*—In answer to yours of the 6th inst., must say that I am more than pleased with your Parabolic Water Motor. It has been running for several months, has given no trouble, and furnishes me with all the power I need. I must admit that before the motor was started I did not believe that so small a one would do my work ; my opinion, however, was based on what I had seen of other motors.

Yours very truly,

ANDREW B. COELLEN.

441 BROAD STREET,

NEWARK, N. J., September 14, 1886.

Messrs. SEYMOUR &amp; WHITLOCK :

*Gents*—My experience with your Parabolic Water Motor has been entirely satisfactory. It furnishes more power than I supposed it would with so small a stream of water, and must say that I know of no other motor that can equal it in that particular. I recommend it with pleasure.

Very truly yours,

HERMAN R. ALBERSON.

NEWARK, N. J., October 27, 1886.

Messrs. SEYMOUR &amp; WHITLOCK :

*Gentlemen*—In reply to your request asking for my opinion concerning the Parabolic Water Motor recently purchased of you, will say that I consider it in every respect the most perfect machine of its kind in the market. It does all you claim for it.

Yours truly,

MICHAEL HELMSTAEDTER,

335 Mulberry Street.

276 BANK STREET,

NEWARK, N. J., September 22, 1886.

MESSES. SEYMOUR & WHITLOCK, City:

*Gentlemen*—I must say, that previous to seeing the Parabolic, I had but little faith in Water Motors. I am glad now I gave yours a trial. I have all the power I want, and shall be pleased to have any one call and see the work it is doing.

Respectfully yours,

SOLOMON OURY.

208 & 210 SPRINGFIELD AVE.,

NEWARK, N. J., October 20, 1886.

MESSES. SEYMOUR & WHITLOCK:

*Gentlemen*—I am highly pleased with your Parabolic Water Motor. It is always ready for use, safe, cheap and reliable. A trial will convince any one of its superiority over others. I would not be without it for ten times its cost.

Yours truly,

SIMON HEYMAN.

NEWARK, N. J., Oct. 12, 1886.

MESSES. SEYMOUR & WHITLOCK:

*Gents*—After giving your Parabolic Water Motor several months' trial, I am convinced, that for the purpose for which it is intended, it has no superior, and would say to others in search of a cheap and reliable power, to try the Parabolic.

Yours truly,

J. SPATCHER,

80 Market Street.

NEWARK, N. J., October 26, 1886.

MESSES. SEYMOUR & WHITLOCK, City:

*Gentlemen*—I can recommend your Parabolic Water Motor to be all you claim for it, and from my experience, when compared with others, would seem as if you had reached the limit of perfection.

Respectfully yours,

THOS. KENNY,

655 Broad Street.

33 SPRINGFIELD AVE.,

NEWARK, N. J., Sept. 28, 1886.

MESSES. SEYMOUR & WHITLOCK:

*Gentlemen*—Your Parabolic Water Motor has my hearty endorsement. It works to perfection, and I cheerfully recommend it as a durable and reliable motive power.

Yours truly,

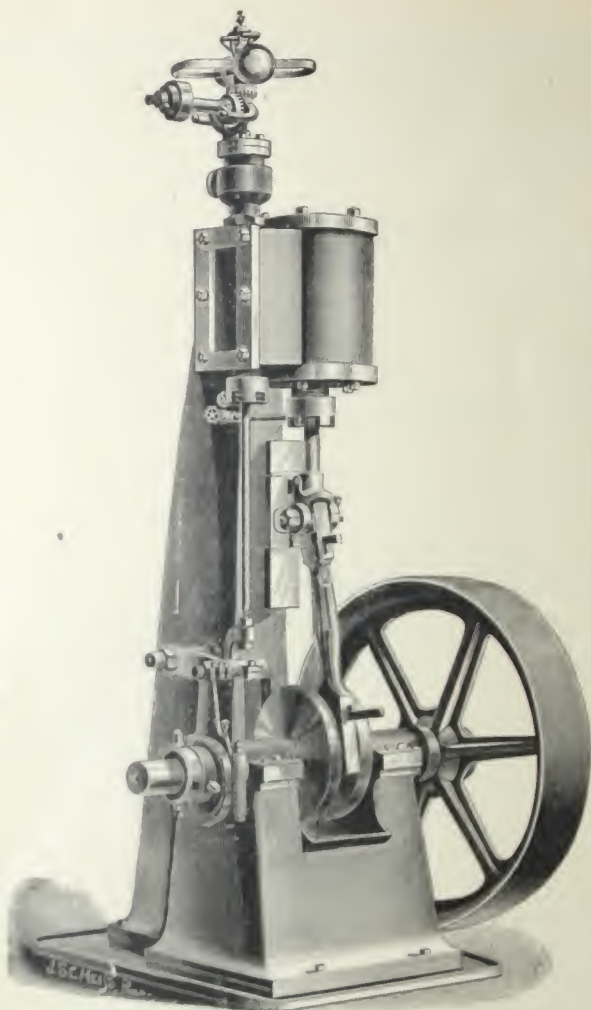
J. H. HEMMENDINGER.



*The Whitlock Dynamo Engine.*

### THE WHITLOCK DYNAMO ENGINE.

IT is a well-known fact, that while an engine of ordinary construction may answer for many mechanical purposes, there are but few in the market that can be used advantageously or successfully to run Dynamos for Electric Lighting. Having engines now in use, driving Dynamos for Electric plants, and which have been subjected to the severest tests by well-known experts, we feel able to say, without fear of contradiction, that for *economy of space, durability* and a *sensitive and reliable power* (which is indispensable to secure a positive and steady light), it has few equals and no superior. And that, while we do not set up the claim so common with many builders that ours is the best in the market, yet we do claim that no engine has done or can do better work. We therefore invite parties requiring an engine for lighting purposes to compare it both in quality and price, with other first-class engines.



*THE WHITLOCK ENGINE.*

PAT. JUNE 6, '83.

## THE WHITLOCK INDEPENDENT VERTICAL STEAM ENGINE.

THE accompanying Engraving represents the Whitlock new Independent or Double Crank Engine. As shown by the cut, it has two bearings for the crank shaft, both being cast solid with the frame, as are also the cross-head slides; in so doing there can be no derangement of lines. The bearings are long and large in diameter, with best of metal, thus insuring strength and durability far in excess of needful duty. They are made both with balance and plain slide valves, with lap to cut off as early as is practicable, and of constant motion, providing for cushion sufficient for smooth running. The valve rod, piston rod, cross-head pin, connecting rod, gib, key and straps are of steel, as well as the crank-shaft. The steel connecting rod is cast hollow, for both lightness and strength, and the piston is also cast hollow, with thin walls, for durability and lightness. The boxes for the crank-shaft have adjusting screws, thus obviating the necessity for lining, as they can be adjusted so as to leave the shafts to turn freely on their bearing. Drain cocks are used for all condensation of cylinder and steam chest.

A test with steam is made of every engine before it leaves our shop, and all parts adjusted, so that the engine is ready to run when set up and steam applied. Their operation is noiseless; their durability is unquestioned.

We challenge all Vertical Engine builders for comparison in simplicity of construction and ease of adjustment in all of its parts. We use gib and key in the connecting rod, believing it is the best, as it saves time in adjusting, therefore saves money.

For sizes and Price List, see next page.

# PRICE LIST OF INDEPENDENT VERTICAL ENGINES.

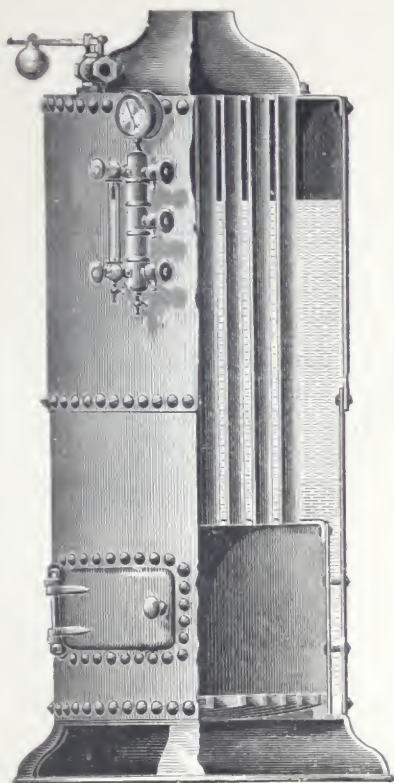
SUBJECT TO CHANGE WITHOUT NOTICE.

Horse Power.	Size of Cylinder.	Revolutions per Minute.	Diameter of Shaft.	Size and Length of Crank Pin.	Size and Length of Cross Head Pin.	Size of Wheel.	Weight of Wheel.	Total Weight of Engine with Wheel.	Size of Steam Pipe.	Size of Exhaust Pipe.	Space Occupied on Floor.	Height of Shaft from Floor.	Height from Floor to Top of Cylinder.	Height to Top of Governor.	Price of Finish'd Engines.	Horse Power.
	<i>Di. In.</i>		<i>In.</i>	<i>In. In.</i>	<i>Di. L.</i>	<i>In. In.</i>	<i>Di. Ft.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>In.</i>	<i>Ft. In.</i>	<i>Ft. In.</i>	<i>Ft. In.</i>	<i>Ft. In.</i>		
3	3 1/4 x 5	300	2	1 1/4 x 2 1/2	1 x 1 1/2	20 x 3	120	425	3/4	1	1	1	3	4	\$160	3
5	4 x 5	300	2	1 1/4 x 2 1/2	1 x 1 1/2	20 x 4	175	500	3/4	1	1	1	3	4	175	5
7	5 x 7	250	2 1/2	2 1/4 x 3	1 1/4 x 2	26 x 5	275	950	1	1 1/4	1	1	3	4	240	7
10	6 x 7	250	2 1/2	2 1/4 x 3	1 1/4 x 2	26 x 6	350	1,000	1 1/4	1 1/2	1	1	3	4	260	10

WITH PLAIN VALVE ALL ABOVE THIS.

WITH OUTSIDE BEARINGS ALL BELOW THIS, AND WITH EITHER PLAIN OR BALANCE VALVE.

15	7 x 9	200	3 1/2	2 1/2 x 3 1/2	1 1/2 x 2 3/4	36 x 7	500	1,900	1 1/2	2	2	1	8	6	370	15
20	8 x 9	200	3 1/2	2 1/2 x 3 1/2	1 1/2 x 2 3/4	36 x 8	600	2,200	2	2 1/2	2	1	8	6	400	20
25	9 x 10	180	4	2 3/4 x 4	1 3/4 x 2 3/4	42 x 9	700	2,550	2	2 1/2	2	1	8	6	525	25
30	10 x 10	180	4	2 3/4 x 4	1 3/4 x 3 1/2	42 x 10	900	3,000	2 1/2	3	2	1	8	6	600	30
35	11 x 12	150	4 1/2	3 x 4	2 x 3 1/2	48 x 10	1000	4,200	2 1/2	3	3	1	10	7	725	35
45	12 x 12	150	5	3 x 4	2 x 3 1/2	48 x 12	1200	4,500	3	3 1/2	3	1	10	7	850	45



*Sectional View of Boiler.*

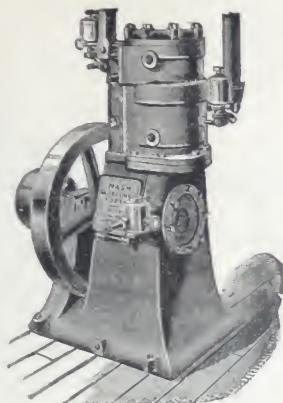
We wish to call special attention<sup>7</sup> to our Upright Boiler. We claim this style of Boiler to be the safest that is made. The material used is of extra quality. The outside shell and fire box are thoroughly stay-bolted together, and the tubes are expanded in such a way as to give the greatest possible strength to the crown sheet. We claim that it is next to impossible to explode one of these Boilers, and would say that although such an accident might happen, yet an occurrence of the kind has never been brought to our attention.

For Price List and dimensions, see next page.

## SPECIFICATIONS AND PRICE LIST FOR UPRIGHT TUBULAR BOILERS.

SUBJECT TO CHANGE WITHOUT NOTICE.

NUMBER OF SIZE.....	1	2	3	4	5	6	7	8	9	10	11	12	13	14
HORSE POWER.....	3	5	6	7	8	10	12	15	18	20	25	30	35	40
Diameter of Boiler, inches.....	21	24	27	30	30	32	34	36	40	40	44	48	48	48
Height of Boiler, feet.....	5	5	5	5	6	6	6 1/2	7	7 1/2	7 1/2	8	8	8	9
Diameter of Furnace, inches.....	16	19	22	25	25	27	28 1/2	30 1/2	34 1/2	34 1/2	38 1/2	42 1/2	42 1/2	42 1/2
Height of Furnace, inches.....	24	24	24	24	24	24	24	24	30	30	30	30	30	30
Thickness of Shell.....	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4
Thickness of Furnace.....	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4
Thickness of Heads.....	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8
Number of 2-inch Tubes.....	20	31	39	46	46	51	56	64	74	84	95	118	138	138
Length of Tubes, inches.....	36	36	36	36	48	48	54	60	60	60	66	66	66	78
Diameter of bottom of Base, inches.....	27	31	35	37	37	39	41	43	47	47	50	54	54	54
Height of Base, inches.....	11	11	13	13	13	13	13	13	13	13	13	13	13	13
Height of Bonnet, Inches.....	8	9	10	11	11	12	13	13	13	13	16	16	16	16
Diameter of Smoke Pipe required, inches.....	7	8	9	10	10	11	12	14	16	16	17	18	18	18
Weight of Boiler without Fixtures.....	750	900	1100	1300	1450	1540	1750	2100	2600	2700	3500	4000	4250	4850
Weight of Fixtures.....	300	400	425	500	500	600	650	700	900	900	1000	1050	1050	1050
Weight of Boiler and Fixtures complete.....	1050	1300	1525	1800	1950	2140	2400	2800	3500	3600	4500	5050	5300	5900
Price of Boiler complete with all Fixtures except Smoke Pipe.....	\$140	\$160	\$180	\$200	\$215	\$235	\$255	\$285	\$348	\$304	\$418	\$465	\$488	\$530

*THE NASH GAS ENGINE.*

**T**HE Nash is a reliable, compact and economical Gas Engine. It can be started instantaneously, and wherever placed has given entire satisfaction. It takes up but a small space and requires but little care to keep in order. This engine, as its name indicates, can be used only where gas is obtainable.

The size of Engines are as follows, with the maximum number of fans that can be driven :

No. 30	will drive	5 Fans.	Price .....
" 31	" "	8 "	" .....
" 32	" "	16 "	" .....
" 33	" "	34 "	" .....



*Acme Automatic Safety Engine.*

*For full particulars, send for Special Catalogue.*

### THE ACME AUTOMATIC SAFETY ENGINE.

**F**IVE hundred of these Engines were sold during the years 1888-9. They are provided with the patent non-explosive sectional boiler, and as a small motive power fill a want long needed, being safe, easily managed, cheap, durable, and adapted to all kinds of light work.

The fuel is kerosene oil of 110° to 115° fire test (this grade giving the best results), atomized by a steam jet, and controlled by an automatic fire regulator that reduces or cuts off entirely the supply of fuel when the steam pressure reaches the limit at which the regulator is adjusted. This fire gives a most intense flame and heat, is easily controlled, makes more even and constant supply of steam from the same amount of heating surface than any other fuel, except natural gas mingled with air, and it is a matter of doubt which of these two gives the hottest flame. The fuel is cleanly; no dust, ashes or smoke, when the fire is properly adjusted, and *cheaper than hard coal at \$4.50 per ton*. As it is not subjected to any heat or flame until it enters the *fire tube*, it is as safe or rather much safer than an *oil lamp*.

#### ≡PRICE LIST≡

One H. P., weight 400 lbs., extreme floor space 32 x 24 in., Pulley 9 in. diameter, 500 revolutions per minute; fuel, Kerosene Oil. Price.....	\$150.00
Two H. P., weight 620 lbs., floor space 42 x 28 in., Pulley 15 in. diameter, 400 revolutions per minute; fuel, Kerosene Oil. Price.....	225.00
Three H. P., weight 750 lbs., floor space 46 x 30 in., Pulley 15 in. or 18 in., as ordered, 400 to 450 revolutions per minute; fuel, Kerosene Oil. Price.....	275.00
Four H. P., weight 1,100 lbs., floor space 52 x 38 in., Pulley 20 in. diameter, 400 revolutions per minute; fuel, Kerosene Oil. Price.....	350.00

# ACME BOAT ENGINES AND BOILERS.

For Use on Waters where U. S. Inspection is Required.

FOR CUT OF SAME SEE OPPOSITE PAGE.

- One H. P. Engine,  $1\frac{1}{2}$  H. P. Boiler, weight about 375 lbs.,  
space occupied in Boat, 33 in. long x 27 in. wide *to clear*  
*all attachments.* Price ..... \$170
- Two H. P. Engine, 3 H. P. Boiler, weight about 600 lbs.,  
space occupied as above, 41 in. long x 30 in. wide. Price \$275
- Four H. P. Engine, 5 H. P. Boiler, weight about 800 lbs.,  
space occupied as above, 50 in. long x 36 in. wide. Price \$400

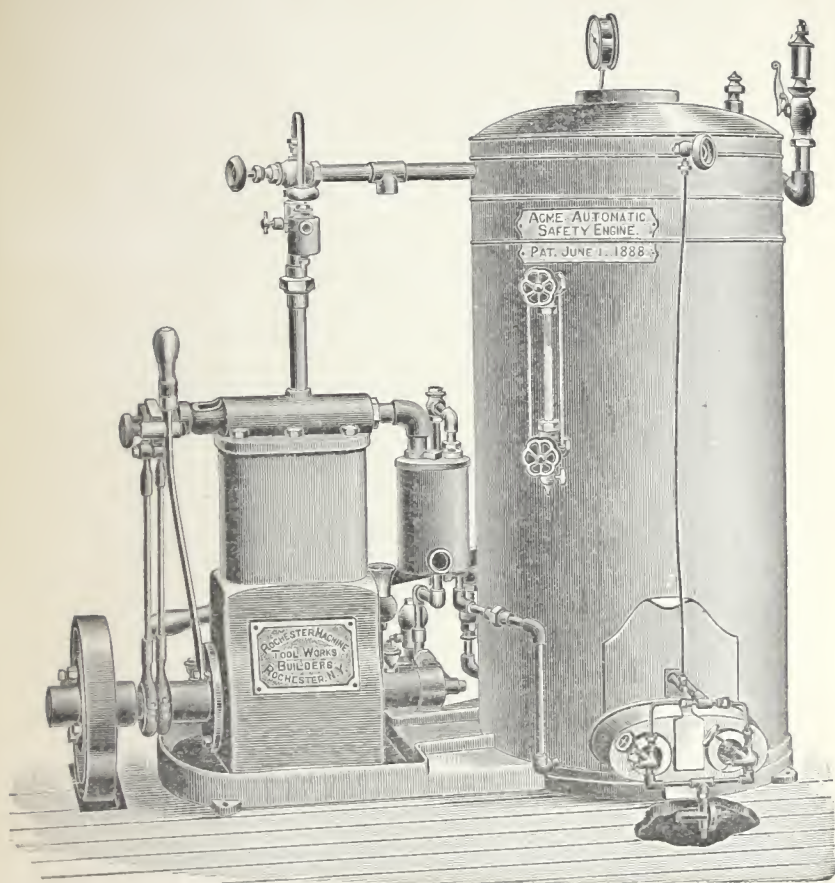
The above Engines and Boilers have their center of gravity very *low*. Can be run at a high rate of speed without jar or racking the boat and are fitted with steam and water glass gauge, and also water gauge cocks, feed water, heater and pump, also with injector as supplemental in case pump should fail, and in fact are fitted out complete to meet the requirements of the U. S. laws governing the inspection of such engines and boilers. Also with a steam syphon to eject the bilge water, *sea cock*, etc., at the prices as above.

## EXTRAS FOR BOAT ENGINES.

- One H. P. Engine,  $\frac{3}{4}$  in. steel shaft wheel, stern bearing  
and stuffing box ..... \$15.00
- Two H. P. Engine, 1 in. steel shaft wheel, stern bearing  
and stuffing box ..... 25.00
- Four H. P. Engine,  $1\frac{1}{4}$  in. steel shaft wheel, stern bearing  
and stuffing box ..... 35.00

The propeller wheels we furnish are cast from bronze metal, are light, smooth and strong.

We also furnish cast-iron wheels from the same patterns, if desired.



## ACME BOAT ENGINE AND BOILER.

*For Full Particulars Send for Special Catalogue.*



## THE PARABOLIC WATER MOTOR.

*Seymour Patent, November 30, 1886.*